Available online at www.sciencedirect.com

ScienceDirect

Procedia Social and Behavioral Sciences 2 (2010) 2092–2098

Procedia Social and Behavioral Sciences

WCES-2010

Turkish adolescents' attitudes toward violence

Rukiye Şahin[a] *, Mustafa Baloğlu[b], Mehmet Ünalmış[c]

[a]*Faculty of Education, Gaziosmanpaşa University, Tokat, Turkey*

Received October 29, 2009; revised December 7, 2009; accepted January 15, 2010

Abstract

Attitude toward violence is a good predictor of violent behavior (Gellman & Delucia-Waack, 2006). Professionals, administrators, and teachers may develop appropriate strategies and intervention methods by assessing adolescents' attitudes toward violence. Moreover, measuring attitudes toward violence can be useful in preventing violent behavior and assessing the effectiveness of training programs. In the present study, the Attitudes Towards Violence Scale (ATVS; Funk Elliott, Urman, Flores, & Mock, 1999) was studied with a group of Turkish adolescents. The original ATVS, a 15-item, 5-point, Likert-type instrument, was developed to measure attitudes toward violence among adolescence (Funk et al., 1999) with two subscales as "reactive violence" and "culture of violence." The sample of the study was 1953 students from 18 different high schools from 10 high school types in two cities; one of which is on the Blacksea region and the other is on the Middle Anatolian Region. In this group, there were 897 men (45.9%) and 1047 women (53.6%). Confirmatory factor analyses were specified and estimated. Because the factor structure of the original scale was not confirmed in the Turkish population, exploratory factor analysis was performed with a principal component analysis and varimax rotation. Results showed that the Turkish version of the ATVS contained two distinct, but related components. These two components are named as "reactive violence" and "culture of violence." Further evidence for construct validity was found through the standardized component loadings, which were all positive and statistically significant, ranging from .27 to .80. The reliability of the scale was investigated in terms of internal consistency of the 13 scale items and was found to be .78.

Keywords: Violence; attitudes toward violence.

1. Introduction

Violence has been one of the most serious problems of our world throughout human history. The World Health Organization (WHO; 1996, as cited in Dahlberg & Krug, 2002, p.5) defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation." This comprehensive definition mentions both using power and force in order to define an action as violence and the factor of intention. It is also noticeable in the definition that in order for the individual to include the violent behavior towards himself. On the other hand, today, a society's using power and force on another society for a number of reasons falls within the definition of violence made by the WHO (1996, as cited in Dahlberg &

* *Rukiye Şahin*. Tel.: +90-356-2521616-3367
E-mail address: rukiyesahin@gop.edu.tr

1877-0428 © 2010 Published by Elsevier Ltd. Open access under CC BY-NC-ND license.
doi:10.1016/j.sbspro.2010.03.287

Krug, 2002). The tendencies to justify these kinds of violent behaviors unfortunately help support and raise the presence of violence intentionally or unwittingly and create environmental conditions that raise violence. As it can be understood from the above definition, violence includes not only a physically harmful action but also using force intentionally resulting in psychological harm, underdevelopment, and recession.

In recent years, there has been an increasing interest in violence research. One of the reasons for such an interest is the social effects of violence. Violence affects society in two ways. First, violence is an action that affects not only the individual but also society. Bufacchi (2005) stated that "one can safely speculate that every person living today will experience, directly or indirectly, some type of violence" (p. 193). Slovak, Carlson, and Helm (2007) reported that at schools, over 80% of students witnessed someone being threatened, slapped, hit, or punched and over 70% witnessed someone being beaten up. In addition to witnessing the acts of violence, it is also highly possible to hear about the violent news happening in the society by means of mass-media, which elicits violence being an action affecting only the individual. Therefore, violence is an action that interests more than one individual. Bufacchi (2005) indicated that, except people losing lives because of a violent action, people who survive would also have great loss. According to him, one of these loses is the death of someone beloved. It can be understood from the broad definition made by the WHO (1996, as cited in Dahlberg & Krug, 2002) that violence does not include only physical harm. Psychological harm after the death of a friend or witnessing the violence also explains how violence may have widespread social effects. The second reason of increasing interest in violence research is that "violence breeds violence" (Salzer. 1981, p. 4). Violence is a good predictor for using violence (Gellman & Delucia-Waack, 2006). In addition, the victims of violence may undertake some other risks. Brockenbrough, Cornell, and Loper (2002) reported that the victims of violence had low academic achievement and more aggressive attitudes, more likely to carry weapon, use alcohol, and fight at the school. When people are exposed to violence they may face some difficulties varying from the decrease in academic achievement to alcohol use. At the same time, they have a potential to implement violent behavior towards others. This behavior is called "modeling" and Bandura (2002) defines the term it as "a universalized human capacity." He indicates that "modeling" varies in different cultural environments. Learning by observation the behavior of the model is universal but the culture of the society in which it occurs identifies how it happens. At the same time, according to Wilkinson (2004), there is a relationship between violence and inequality and people undertake risk for experiencing violence in these societies. The society and culture in which individuals live will identify the possibility of being exposed to violence and learnig from the "model." Consequently, if violent behavior is approved in a culture and the inequalities are used for the advantage of someone who has power, the observer learn and display violent behavior and power abuse.

Dahlberg and Krug (2002) explain that although violence is a widespread problem, it cannot be prevented instantly. Moreover, it can only be prevented by the common effects of religious, philosophical, and legal factors. The prevention of violence, of course, is important in order for the individuals not to suffer from any kind of violent action. In spite of the fact that there is an increasing awareness and respect for the individual's rights, attitude against violence is not taken on in spite of violence. Brand and Anasstasio (2006) reported that individuals who define themselves as politically conservative supported capital punishment but at the same time they showed less support for crime prevention efforts. Aimed at the penalization of violence, that supports the violation of the right to live, the most serious abuse of human right, by the government and legal reasons is a remarkable finding in order for the researchers and people who undertake the responsibility of political decisions to attract attentions.

Variables related to attitudes toward violence have been investigated in different studies. Mervin and Ellis (2004) indicated that attitudes toward violence were related to gender and self-esteem and low self-esteem has been found to be related to accepting attitudes toward violence. Gender is another related variable in that men are more likely to have positive violence related attitudes (Mervin & Ellis, 2004; Smith, Ellis & Benson, 2001; Funk et al., 2003; Slovak et al., 2007). Gellman and Delucia-Waack (2006) found a positive relationship between adolescents'attitudes toward violence and the use of violence. Their results indicated that "violence culture" was the strongest predictor of committing violence.

Determining the attitudes toward violence is very important in preventing violence. Meanwhile, Gellman and Delucia-Waack (2006) indicated that attitude toward violence was a good predictor for the use of violence. The relationship between attitudes toward violence and being exposed to violence was also referred in some studies. Funk et al., (2003) expressed that being a victim of violence was a predictor of stronger pro-violence attitudes. There are also other studies stating the relationship between being exposed to violence and committing violence (Brockenbrough, Cornell & Loper, 2002; Gellman & Delucia-Waack, 2006). This continuous relationship between

attitudes toward violence, being exposed to violence and committing violence also reveals the importance of developing intervention programs by determining the attitudes toward violence. In recent years, researchers have developed several scales for assessing attitude toward violence (Benjamin, 2006; Funk et al., 1999; Funk et al., 2003; Velicer et al., 1989; Anderson, Benjamin, Wood & Bonacci, 2006; Brand & Anastassio, 2006). It is important to assess attitudes toward violence that might have a high risk of turning into violent behavior. For the abovemention purposes, it is important to assess attitudes towards violence by means of a valid and reliable instrument. Therefore, the purpose of the present study was to determine the construct validity and reliability of the ATVS for Turkish adolescent sample.

2. Method

2.1. Sample

The Turkish version of the ATVS was administered to 1953 high school students from 18 different high schools from 10 high school types in two cities; one of which is on the Blacksea region and the other is on the Middle Anatolian Region. In this group, there were 897 men (45.9%) and 1047 women (53.6%). Nine students (.5%) did not report gender. Ages of the students ranged from 13 to 18 years ($\bar{X}$ = 15.85, *SD* = 1.03). Students in the sample had 1 to 4 siblings ($\bar{X}$ = 2.22, *SD* = .84).

Table 1. shows educational level of the parents of the students participated in the study.

	Educational Level	
	Mother's	Father's
Primary School	1119 (57.3%)	395 (30.5%)
Secondary School	324 (16.6%)	389 (19.9%)
High School	292 (15.0%)	489 (25%)
College	143 (07.3%)	448 (22.9%)

As shown in the table, most mothers and fathers graduated from primary school. In addition, it was found that most families (78.9%) were earning less than $ 12.000 annually.

2.2. Instruments

The original ATVS, translated version, and a set of demographic questions were used to collect the data. The original ATVS, a 15-item, 5-point, Likert-type instrument, was developed to measure attitudes toward violence among adolescence (Funk, Elliott, Urman, Flores, & Mock, 1999). Funk et al. (1999) developed the scale and studied its initial validity and reliability on 1266 adolescents. A principal component analysis with varimax rotation showed a two-factor solution. First seven items loaded on the first factor and last eight factors loaded on the second factor. Seventh item loaded on both factors. The factors are named as culture of violence and reactive violence, which had Cronbach's alpha reliability of .75 and .80, respectively.

2.3. Procedure

The first adaptation study of ATVS was made by Ozbek and Sahin (2007) on a university sample with 722 females and 627 males. A principal component analysis with obligue rotation was made and factor structure of the study was revealed. The Turkish form of the scale consists of two factors after reversed items were excluded from the scale. Although the factorial structure of the scale was found similar to the original scale, item 7 was loaded on a single factor different from the original factor structure where it loaded on both factors and item 13 was loaded in culture of violence instead of reactive violence. The internal consistency of the total scale which consists of 12 items was .81 and for the sub-dimension of culture of violence was found .66 and reactive violence .77.

In order to conduct the present study, the Turkish version of the scale was reviewed for understanding it better in Turkish and the revised form was translated back to English. Original and back-translated items were compared and found that there was a high level of agreement between the two versions. Then, the scale was investigated in terms of construct validity. Results obtained from the student sample were used for investigating construct validity and

reliability. For construct validity, confirmatory factor analysis and principal component analysis were performed. In confirmatory factor analysis phase, a one-factor and the original two-factor structures were investigated. In addition, internal consistency coefficients (Cronbach α) were computed as the evidence of reliability. Two main software programs were used to analyze the data: *Statistical Package for Social Sciences* (SPSS) 17.0 (SPSS Inc, 2008) and Equations 6.2 (EQS Inc, 2004). Data were coded onto SPSS 17.0 database and arranged so that they could be transferred onto EQS 6.2.

2.4. Analysis

Confirmatory factor analyses were specified and estimated using EQS 6.2 (EQS Inc, 2004). A covariance matrix was computed using the 15 items of the Turkish version of the ATVS and model parameters estimated using the maximum likelihood method. Factors were allowed to correlate and no correlated errors were included in the estimation models. In order to evaluate the fit of the models, observed model covariances were compared with the null hypothesis model (Yamada & Pandey, 1995). Fit of any model was assessed by a non-significant χ^2, Incremental Fit Index (IFI; Bollen, 1989) ≥ .90, Normalized Fit Index (NFI; Bentler & Bonett, 1980; Marsh, Balla, & McDonald, 1988) ≥ .80, Non-normalized Fit Index (NNFI; Bentler & Bonett, 1980) ≥ .90, Comparative Fit Index (CFI; Bentler, 1990) ≥ .90, Standardized Root Mean Square of Errors < .10 (SRMR; Marsh, Balla, & McDonald, 1988), and Root Mean Square Error Approximation (RMSEA; Steiger, 1990; Bentler & Bonnet, 1980; Marsh, et al, 1988) < .10. In the event that the factor structure of the Turkish version was not confirmed, principal component analysis was performed on a varimax rotation Kaiser normalization. Finally, as suggested by Henson (2000) and Thompson and Vacha-Haase (2000), internal consistency coefficients for the total and two subscales of the Turkish version of the ATVS were reported.

3. Results

3.1. Preliminary Validity Results

Construct Validity: As the variables in the present study met multivariate normality ($p > .001$), confirmatory factor analyses were computed with maximum likelihood estimation method in the model specification of the measurement models. The construct of attitudes toward violence is hypothesized to have a two-factor structure (Funk et al., 1999) in English speaking societies. Therefore, the present study tested a single factor and two-factor measurement models on a group of Turkish adolescents.

Fit indices showed that one-factor, two-factor (i.e., reactive violence and culture of violence) models were poor and were rejected (Most fit indexes lower than .90). Therefore, in order to investigate the factor structure of the attitudes toward violence among Turkish adolescents, principal component analysis was performed on the 13 items of the ATVS. Item 4 and item 15 were excluded because of low correlation with the scale.

The results of the analysis with a varimax rotation showed that four components had eigenvalues greater than 1.00; however, scree plot and interpretability indicated that a two-factor solution was most parsimonious. Therefore, using two-factor solution was decided. These two components are “reactive violence” which had an eigenvalue of 1.40 and explained 17.54% of the variability and “culture of violence” which had an eigenvalue of 3.84 and explained 22.66% of the variability. Thus, the combination of these two components explained 40.2% of the total variability.

Table 2. shows 13 scale items and two factors on which each item loaded.

Items	Components and Loadings	
	First	Second
1. I could see myself committing a violent crime in 5 years.	.72	
2. I could see myself joining a gang.	.80	
3. It’s okay to use violence to get what you want.	.61	
5. People who use violence get respect.	.56	
6. Lots of people are out to get you.	.27	
7. Carrying a gun or knife would help me feel safer.	.55	

8. If a person hits you, you should hit them back.		.73
9. It's okay to beat up a person for badmouthing me or my family.		.74
10. It's okay to carry a gun or knife if you live in a rough neighborhood.		.52
11. It's okay to do whatever it takes to protect myself.		.68
12. It's good to have a gun.	.59	
13. Parents should tell their children to use violence if necessary.	.38	
14. If someone tries to start a fight with you, you should walk away.		.30
Eigenvalues	3.84	1.40
Percentage of variance explained	22.66	17.54

The internal consistency of the total scale which consists of 13 items was .78 and for the sub-dimension of culture of violence was found .73 and reactive violence was found .63.

4. Discussion

The original ATVS has consistently been used in violence related studies in the literature. However, no such scale exists in Turkey for adolescent group. Therefore, this research adapted the ATVS for Turkish adolescents and studied its initial psychometric properties. The Turkish version's construct validity, and internal consistency were also gained. Two alternative structures based on the literature were specified and tested in the construct validity phase. On the basis of the fit indices, the two-factor model that was proposed by Funk et al. (1999) was not confirmed in the Turkish sample, neither was the single-factor model. It is concluded that attitudes toward violence may be experienced differently across various cultures as culture plays a significant role in attitudes (Draguns & Tanaka-Matsumi, 2003). Further studies are encouraged to test the factor structure of the Turkish version of ATVS, especially in non-English speaking populations.

Because the factor structure of the original scale was not confirmed in the Turkish population, a principal component analysis was performed. Results showed that the Turkish version of the ATVS consists of two distinct, but related, structures. These two components are named as "reactive violence" and "culture of violence." Further evidence for construct validity was found through the standardized factor loadings, which were all positive and statistically significant, ranging from .27 to .80.

Different from the original scale, item 12 (It's good to have a gun) and item 13 (Parents should tell their children to use violence if necessary) loaded in the culture of violence component. This can be possibly explained by cultural differences. Bandura (2002) indicated that modeling is a universal humanistic characteristic but how to learn from a model depends on the culture. When item 12, it is good to have a gun, and item 13, parents should tell their children to use violence if necessary, are investigated it can be seen that the content of the knowledge learned from the models was told can be seen. Both items can be regarded as items comprehending as related to a different violence culture dissimilar from the culture from which the original scale was taken. In the light of the cultural evidence, it can be said that "having a gun" or "teaching violent behavior if necessary" are the attitudes gained by observing a model or attitudes directly learned from the models in the Turkish culture. In addition, according to Funk et al. (1999) the items of violence culture reflect the attitudes of people who view themselves as members of a local culture of violence. This point of view can differ from culture to culture. As a result, these two items loading on the culture of violence component can be explained as cultural differences.

Current literature in Turkey shows no studies that confirm the factor structure of the ATVS for adolescent samples so this study became the first attempt on the factor structure of the Turkish version of the ATVS for an adolescent sample. Future research should be conducted to test temporal stability and robustness of the two-factor model. In addition, invariance of the model across different sub-samples of Turkish population should be studied.

The scale's reliability was investigated in terms of internal consistency and 13 items' internal consistency was found to be .78 for the total scale, .73 for culture of violence and .63 for reactive violence respectively. This result is similar to Funk et al. (1999) who found internal consistency of the ATVS as .86. Rest-retest reliability of the Turkish version of the ATVS was not dealed in the present study. Therefore, future studies should investigate the temporal stability of the scale. Preliminary psychometric properties of the scale indicated promising results. However, further studies are still needed including further construct validity, concurrent validity, predictive validity, convergent validity, and divergent validity.

References

Anderson, C. A., Benjamin, A. J., Wood, P. K., & Bonacci, A. M. (2006). Development and testing of the Velicer attitudes toward violence scale: Evidence for a four-factor model. *Aggressive Behavior*, 32, 122-136.

Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51(2), 269-290.

Benja min, A. J. (2006). The relationship between right-wing authoritarianism and attitudes toward violence: Further validation of the Att itudes Toward Violence Scale. *Social Behavior and Personality*, 34(8), 923-926.

Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107,* 238-246.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness-of-fit in the analysis of covariance structures. *Psychological Bulletin, 88,* 588-606.

Bollen, K. A. (1989). *Structural equations with latent variables.* New York: Wiley.

Brand, P. A., & Anastasio, P. A. (2006). Violence-related attitudes and beliefs: scale construction and psychometrics. *Journal of Interpersonal Violence,* 21, 856-868.

Brockenbrough, K. K., Cornell, D. G., & Loper, A.B. (2002). Aggressive attitudes among victims of violence at school. *Education and Treatment of Children*, 25(3), 273-287.

Bufacchi, V. (2005). Two concepts of violence. *Political Studies Review*, 3, 193-204.

EQS, Inc. (2004). *EQS for Windows user's guide.* Multivariate Software: Author.

Draguns, J. G., & Tanaka-Matsumi, J. (2003). Assessment of psychopathology across and within cultures: Issues and findings. *Behaviour Research and Therapy, 41*, 755-776.

Funk, J. B., Elliott, R., Urman, M. L., Flores, G. T., & Mock, R. M. (1999). The attitudes towards violence scale: A measure for adolescents. *Journal of Interpersonal Violence,* 14, 1123-1136.

Funk, J. B., Elliott, R., Bechtoldt, H., Pasold, T., &Tsavoussis, A. (2003). The attitudes toward violence scale: Child version. *Journal of Interpersonal Violence,* 18, 186-196.

Gellman, R. A., & Delucia-Waack, J.L. (2006). Predicting school violence: A comparison of violent and nonviolent male students on attitudes toward violence, exposure level of violence, and PTSD symptomatology. *Psychology in the Schools*, 43 (5), 591-598.

Henson, R. K. (2000, November). *A primer on coefficient alpha.* Paper presented at the annual meeting of the American Educational Research Association, San Francisco, CA. (ERIC Document Reproduction Service No. ED314483)

Dahlberg, L. L. & Krug, E. G. (2002). Violence - a global public health problem . Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A.B., & Lozano, R. (Eds.), *World report on violence and health* (1-21). World Health Organization, Geneva.

Marsh, H. W., Balla, J. R., & McDonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*, 391-410.

Merwin, R. M., & Ellis, J. B. (2004). Children's reasons for living, self-esteem, and violence. *Archives of Suicide Research*, 8 (3), 251–261.

Ozbek, O. Y., Sahin, R. (2007). Reliability and validity of attitude toward violence scale. *Paper presented XVI. National Educational Sciences Congress*, 5-7 September, Tokat, Turkey.

Salzer, E. M. (1981). To combat violence in the child's world: Swedish efforts to strengthen the child's rights. *School Psychology International,* 2, 4-6.

Slovak, K., Carlson, K., & Helm, L. (2007). The influence of family violence on youth attitudes. *Child and Adolescent Social Work Journal*, 24 (1), 77-99.

Smith, S.C., Ellis, J.B., & Benson, T.A. (2001). Gender, gender roles and attitudes toward violence: Are viewpoints changing? *Social Behavior and Personality*, 29(1), 43-48.

SPSS, Inc. (2008). *SPSS Base 10.0 Applications Guide*. Chicago: SPSS Inc.

Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research, 25,* 173-180.

Thompson, B., & Vacha-Haase, T. (2000). Psychometrics is datametrics: The test is not reliable. *Educational and Psychological Measurement, 60,* 174-195.

Velicer, W. F., Huckel, L. H., & Hansen, C. E. (1989). A measurement model for measuring attitudes toward violence *Personality and Social Psychology Bulletin,* 15, 349-364.

Wilkinson, R. (2004). Why is violence more common where inequality is greater? *Annals New York academy of sciences*, 1036, 1–12.

Yamada, G., & Pandey, S. (1995). Effect of sample size on goodness-of-fit indices in structural equation models. *Journal of Social Service Research, 20* (3/4), 49-70.

Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.

Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51-59.

Strunk, W., Jr., & White, E. B. (1979). *The elements of style.* (3rd ed.). New York: Macmillan, (Chapter 4).

Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.

Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51-59.

Strunk, W., Jr., & White, E. B. (1979). *The elements of style.* (3rd ed.). New York: Macmillan, (Chapter 4).

Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.

Van der Geer, J., Hanraads, J. A. J., & Lupton R. A. (2000). The art of writing a scientific article. *Journal of Scientific Communications*, 163, 51-59.

Strunk, W., Jr., & White, E. B. (1979). *The elements of style.* (3rd ed.). New York: Macmillan, (Chapter 4).

Mettam, G. R., & Adams, L. B. (1994). How to prepare an electronic version of your article. In B. S. Jones, & R. Z. Smith (Eds.), *Introduction to the electronic age* (pp. 281-304). New York: E-Publishing Inc.